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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,538	01/23/2004	Sang Woon Suh	1740-000040/US	4972
30593 7590 12/28/2007 HARNES, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195			EXAMINER COLEMAN, VANESSA V	
			ART UNIT 2627	PAPER NUMBER
			MAIL DATE 12/28/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/762,538	Applicant(s) SUH ET AL.	
	Examiner Vanessa (Brandi) Coleman	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Korea on January 23, 2003. It is noted, however, that applicant has not filed a certified copy of the 10-2203-0004487 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3, 8, and 9 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The term "substantially" in claim 1-3, 8, and 9 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The degree to which the pits formed in other portions of the tracks of the control data area are formed as straight pits is thus rendered indefinite by use of the term "substantially".

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18, 20-23, 25-27, and 29 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Yoshito et al. (hereafter "Yoshito"), Japanese Patent Publication Number 9-081938 (note that the document has been translated by computer, so the translation contains some spelling and grammatical errors. In light of the use of a machine-translated document, it is pointed out by examiner that the words "truck" and "rock," and variations thereof, found in the document are to be read as "track" and "wobble" and their corresponding variations).

Regarding Claim 1, Yoshito discloses a recording medium including recorded data (see Drawing 5), comprising: a control data area (management data field 32) including pits formed along tracks, with data recorded therein (see [0032]-[0038]), wherein pits in some portions of the tracks are formed as wobbled pits (displacement pit train 41), pits in other portions of the tracks of the control data area are substantially formed as straight pits (track 40, where data must be recorded in straight pits in order to be distinguished by the displacement pit train 41), and the wobbled pits are formed at

least one of intermittently and alternately with the straight pits within the control data area (Drawing 5(c), where the displacement pit train 41 is repeated several times on track 40, and there are also straight pit sections found within displacement pit train 41, such that the limitation "the wobbled pits are formed at least one of intermittently and alternately with the straight pits" is met).

Regarding Claims 2 and 8, method claims 2 and 8 are drawn to the method of using the corresponding product, recording medium, claimed in claim 1. Therefore method claims 2 and 8 correspond to apparatus claim 1 and are rejected for the same reasons of anticipation as used above.

Regarding Claim 3, Yoshito discloses a method of reproducing data from a recording medium, comprising: detecting control information recorded in pits formed along tracks in a control data area, ([0032], management data field 32) wherein pits in some portions of the tracks are formed as wobbled pits (displacement pit train 41), pits in other portions of the tracks of the control data area are substantially formed as straight pits (track 40, where data must be recorded in straight pits in order to be distinguished by the displacement pit train 41), and the wobbled pits are formed at least one of intermittently and alternately with the straight pits within the control data area (Drawing 5(c), where the displacement pit train 41 is repeated several times on track 40, and there are also straight pit sections found within displacement pit train 41, such that the limitation "the wobbled pits are formed at least one of intermittently and alternately

with the straight pits" is met); and generating the control information to reproduce main data recorded with modulation in straight pits formed along tracks of a main data area of the recording medium (see [0017], where Yoshito suggests that use of data recorded elsewhere on the medium is controlled by generating/reading the control data).

Regarding Claim 4, Yoshito discloses the method according to claim 3, wherein said detecting step comprises: converting signals reflected from the wobbled pits into electrical signals and extracting the control information by applying the electrical signals to a logic circuit (see [0051]).

Regarding Claim 5, Yoshito discloses the method according to claim 4, further comprising: reproducing the main data using the generated control information, and outputting the reproduced main data (see [0056] and [0017], where Yoshito suggests that main data is reproduced according to disk judgment, and noting that outputting reproduced data is inherent).

Regarding Claim 6, Yoshito discloses the method according to claim 3, wherein detecting step detects the control information recorded in pits from a difference signal between a right and a left electric signals, generated by a beam reflected from the pits formed along the tracks (see paragraph [0055] and Drawing 9).

Regarding Claim 7, Yoshito discloses the method according to claim 6, wherein said detecting step further detects data (see paragraph [0020]) from a high-frequency electric signal generated by a beam reflected from the pits (see paragraph [0055])

Regarding Claim 9, Yoshito discloses an apparatus for reproducing data from a recording medium, said apparatus comprising: a detection unit adapted to detect control information recorded in pits formed along tracks in a control data area (see [0055], Drawing 19, displacement pit train detecting element 80), with data recorded therein, wherein pits in some portions of the tracks are formed as wobbled pits (Drawing 5, displacement pit train 41), pits formed in other portions of the tracks of the control data area are substantially formed as straight pits (track 40, where data must be recorded in straight pits in order to be distinguished by the displacement pit train 41), and the wobbled pits are recorded at least one of intermittently and alternately with the straight pits (Drawing 5(c), where the displacement pit train 41 is repeated several times on track 40, and there are also straight pit sections found within displacement pit train 41, such that the limitation "the wobbled pits are formed at least one of intermittently and alternately with the straight pits" is met), and wherein the detection unit converts signals reflected from the pits into electric signals; and a signal processor adapted to process the electric signals to generate the control information and to process main data recorded with modulation in straight pits formed along tracks of a main data area of the recording medium (signal processing section 79).

Regarding Claim 11, Yoshito discloses the apparatus according to claim 9, wherein the signal processor generates the control information from low-frequency components (see [0055], it is noted that the displacement pit train is detected using the low-frequency component by comparing the high-frequency component with the low-frequency component) and generates the main data from high-frequency components ([0055], it is noted that it is inherent that any data is detected using the high-frequency component by comparing the high-frequency component with the low-frequency component).

Regarding Claim 12, Yoshito discloses the apparatus according to claim 9, further comprising: a controller (phase compensation section 75), coupled to said detection unit and said signal processor to control the detection of the control information and the processing of the main data recorded on the recording medium using the detected data, wherein the controller controls said signal processor to output the main data based on the control information (where reproduction of main data is determined according to the performed disk judgment).

Regarding Claim 13, Yoshito discloses the apparatus according to claim 12, wherein the controller controls said detection unit to detect the control information by a push-pull method (differential circuit 73 generates the tracking error signal using the known push-pull method).

Regarding Claim 14, Yoshito discloses the recording medium according to claim 1, wherein the data includes protection information used for controlling reproduction and/or recording of main data (see paragraph [0011]).

Regarding Claim 15, Yoshito discloses the method according to claim 2, wherein the data includes protection information used for controlling reproduction and/or recording of main data (see paragraph [0011]).

Regarding Claim 16, Yoshito discloses 16 the method according to claim 3, wherein the control information includes protection information for controlling reproduction and/or recording of main data, and wherein the detecting step detects the protection information (see paragraph [0011]).

Regarding Claim 17, Yoshito discloses the method according to claim 8, wherein the data includes protection information used for controlling reproduction and/or recording of main data (see paragraph [0011]).

Regarding Claim 18, Yoshito discloses the apparatus according to claim 12, wherein the control information includes protection information used for controlling reproduction and/or recording of the main data, and wherein the controller controls the reproduction of the main data in response to the protection information (see paragraph [0011]).

Regarding Claim 20, Yoshito discloses the recording medium according to claim 14, wherein the protection information is repeatedly encoded in plural arrays of the wobbled pits (see Drawing 5, [0036]).

Regarding Claim 21, Yoshito discloses the recording medium according to claim 1, wherein the control data area comprises arrays of the wobbled pits and arrays of the straight pits periodically (see Drawing 5, the arrangement of track 40 and displacement pit trains 41).

Regarding Claim 22, Yoshito discloses the recording medium according to claim 1, wherein arrays of the wobbled pits and arrays of the straight pits in the control data area are of different length (see Drawing 5, the arrangement of track 40 and displacement pit trains 41).

Regarding Claim 23, Yoshito discloses the recording medium according to claim 1, further comprising: a main data area including main data recorded with modulation in straight pits formed along tracks (see [0002]-[0003] and Drawing 5, where Yoshito suggests the use of an optical disk known in the art having main data recorded thereon, whereby distinguishing a management data field 32 further suggests the disk features a main data area wherein pits are recorded in straight pits inherently).

Regarding Claims 25-27 and 29 are drawn to the method of using the product of corresponding product claims 20-23, such that Claims 25-27 and 29 correspond to claims 20-23 and are thereby rejected for the same reasons of anticipation as cited above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 19, 24 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yoshito et al. (hereafter "Yoshito"), Japanese Patent Publication Number 9-081938, in view of Minamino et al. (hereafter "Minamino"), US Patent Publication. No. 2003/0007432.

Regarding Claim 19, Yoshito discloses the recording medium according to claim

1. Yoshito does not disclose that the data in the control data area is recorded in the wobbled pits by bi-phased modulation.

Minamino discloses a recording medium (Fig. 36, optical disk medium") featuring control data recording in wobbled pits ([0395]), wherein the data in the control data area is recorded in the wobbled pits by bi-phased modulation ([0402—[0403]). Minamino are analogous art in that they both disclose an optical recording disk with control data recorded with wobbled pits. Therefore, it would have been obvious to one of ordinary skill in the art to record the control data of Yoshito using the modulation format of Minamino to improve the protection function of the control data.

Regarding Claim 24, Yoshito discloses the method according to claim 2. Yoshito does not disclose that the data in the control data area is recorded in the wobbled pits by bi-phased modulation.

Minamino discloses a recording medium (Fig. 36, optical disk medium") featuring control data recording in wobbled pits ([0395]), wherein the data in the control data area is recorded in the wobbled pits by bi-phased modulation ([0402—[0403]). Minamino are analogous art in that they both disclose an optical recording disk with control data recorded with wobbled pits. Therefore, it would have been obvious to one of ordinary skill in the art to record the control data of Yoshito using the modulation format of Minamino to improve the protection function of the control data.

Regarding Claim 28, Yoshito discloses the method according to claim 3. Yoshito does not disclose that the detecting step detects the control information recorded in the wobbled pits by bi-phased modulation, in the control data area.

Minamino discloses a recording medium (Fig. 36, optical disk medium") featuring control data recording in wobbled pits ([0395]), wherein the data in the control data area is recorded in the wobbled pits by bi-phased modulation ([0402—[0403]). Minamino are analogous art in that they both disclose an optical recording disk with control data recorded with wobbled pits. Therefore, it would have been obvious to one of ordinary skill in the art to record the control data of Yoshito using the modulation format of Minamino to improve the protection function of the control data.

Response to Arguments

8. Applicant's arguments filed 12 September 2007 have been fully considered but they are not persuasive. The arguments regarding Yoshito's failure to disclose that "the wobbled pits are formed at least one of intermittently and alternately with the straight pits within the control data area" are rendered moot in that this feature is clearly illustrated in Drawing 5, where the displacement pit train 41 is recorded in numerous areas on track 40; a fact that is also disclosed in [0036].

Conclusion

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vanessa (Brandi) Coleman whose telephone number is (571) 272-9081. The examiner can normally be reached on Mon-Thurs 8:30-6; 1st Fri off, 2nd Fri 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571) 272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

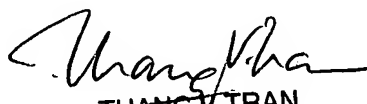
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Vanessa (Brandi) Coleman
Art Unit 2627

VC


THANG T. TRAN
PRIMARY EXAMINER